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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER NUMBER
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10

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademark

Office Action Summary

Application No.

09/603,595

Applicant(s)

LIM, DEUK-SUNG

Examiner

Susan S. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-10, 13-15 and 17-19 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 11, 12, 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Sasaki et al. (616).

Applicant's admitted prior art in the preamble discloses all elements of the apparatus except for the means for increasing expansibility of the optional auxiliary device, the means comprising a first [paper transport path], a second paper transport path, and a third paper transport path for discharging the sheets of recording paper which the feeding unit has fed.

Sasaki et al. discloses a sheet-stacking device 60 comprising a sorter 57 and a sheet-feeder 59 for refeeding the sheets for duplexing in an image forming apparatus. The sorter 57 and sheet-feeder 59 read on the instant invention's optional auxiliary device and feeding unit, respectively. The means for increasing expansibility of the sorter 57 comprises paths such as 144, 125, and 132₁ - 132_n. These paths or passages discharge sheets that are fed from sheet-feeder 59. Another cassette C₃ with sheets that can be fed into the image forming apparatus by way of the sheet-feeder 59. Note Figs. 7 and 8; column 13, lines 3-65.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Applicant's admitted prior art in the preamble with that of Sasaki et al. to allow Applicant's admitted prior art to perform multiple functions in order to enhance copying capabilities desired by an operator. Such multiple functions include making duplex copies or superimposed copies as disclosed by Sasaki et al. (Note abstract).

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (616) in view of Takahashi et al. (101) and Arai (828).

Sasaki et al. discloses a sheet-stacking device 60 comprising a sorter 57 and a sheet-feeder 59 for refeeding the sheets for duplexing in an image forming apparatus. The sorter 57 and sheet-feeder 59 read on the instant invention's optional auxiliary device and feeding unit, respectively. The means for increasing expansibility of the sorter 57 comprises paths such as 144, 125, and 132₁ - 132_n. These paths or passages discharge sheets that are fed from sheet-feeder 59. Another cassette C₃ with sheets that can be fed into the image forming apparatus by way of the sheet-feeder 59. Note Figs. 7 and 8; column 13, lines 3-65.

Sasaki et al. differs from the instant invention by not disclosing a feeding cassette mounted at a lower portion of the main body and the feeding unit is removable.

Takahashi et al. discloses using an optional large capacity feeder unit 6 and a paper feeding unit 4 that each has the same area as the area of both main body 1 and the second unit 3 that are located above the units 4 and 6. Note column 1, lines 31-47, column 2, lines 31-44, and Fig. 2.

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Arai discloses a sheet jam removal device in a sheet conveying unit. The sheet jam removal device have a lower conveyor 32 or lower conveying guide 45 that is a rectangular base member, a cover plate or upper conveyor 33 or upper conveying guide 50, paper feeding means 51 on upper conveyor 33 and 46 on the lower conveyor, and guiding means 35 for guiding the sheet jam removal device back and forth. As shown in Figs. 7a - 7b, there is a hinge shaft (not numbered in figures) located on the upper conveyor 33 for pivoting the upper conveyor 33 when it is separated from the lower conveyor 32. The linkage 34 links the upper conveyor 33 and the lower conveyor 32 which reads on the instant invention's elastic member. A handle shown in Fig. 2 is on the top of the front side of the main frame 30 of the sheet jam removal device for an operator to withdrawn the device from the image forming apparatus to access to it when a jam has occurred. When a jam occurs in this section of the image forming apparatus, a display section on the upper surface of the copying machine main body 1 will indicate a jam has occurred. Note column 7, line 39- column 8, line 65, and column 9, lines 19-45.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Sasaki et al. with that of Takahashi et al. in order to expand supplies of paper to be copied without occupying more floor space.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Sasaki et al. with that of Arai because it is well known in the art that sheet jams occur along a sheet conveyance path in an image forming apparatus due to a build

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up of static electricity or humidity inside the image forming apparatus. In order to remove a sheet jam from a sheet path, one looks to Arai for an operator-accessible way that is noncumbersome (note column 2, lines 6-22) to maintain clearing of sheet jam in an image forming apparatus. Note column 1, lines 5-11.

4. Claims 2, 3, 7, 13-15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Arai (828).

Applicant's admitted prior art in the preamble discloses all elements of the apparatus, process, and process of making except for a feeding unit with a jammed paper removing means.

Arai discloses a sheet jam removal device in a sheet conveying unit. The sheet jam removal device have a lower conveyor 32 or lower conveying guide 45 that is a rectangular base member, a cover plate or upper conveyor 33 or upper conveying guide 50, paper feeding means 51 on upper conveyor 33 and 46 on the lower conveyor, and guiding means 35 for guiding the sheet jam removal device back and forth. As shown in Figs. 7a - 7b, there is a hinge shaft (not numbered in figures) located on the upper conveyor 33 for pivoting the upper conveyor 33 when it is separated from the lower conveyor 32. The linkage 34 links the upper conveyor 33 and the lower conveyor 32 which reads on the instant invention's elastic member. A handle shown in Fig. 2 is on the top of the front side of the main frame 30 of the sheet jam removal device for an operator to withdrawn the device from the image forming apparatus to access to it when a jam has occurred. When a jam occurs in this section of the image forming apparatus, a display section

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on the upper surface of the copying machine main body 1 will indicate a jam has occurred. Note column 7, line 39- column 8, line 65, and column 9, lines 19-45.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus as disclosed in Applicant's admitted prior art (preamble - Jepson claim) with that of Arai so that sheet jams can be more easily removed in an image forming apparatus. It is well known in the art that sheet jams occur along a sheet conveyance path in an image forming apparatus due to a build up of static electricity or humidity inside the image forming apparatus. In order to remove a sheet jam from a sheet path, one looks to Arai for an operator-accessible way that is noncumbersome (note column 2, lines 6-22) to maintain clearing of sheet jam in an image forming apparatus. Note column 1, lines 5-11.

5. Claims 2, 3, 7, 9, 10, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (616) in view of Arai (828).

Sasaki et al. discloses a sheet-stacking device 60 comprising a sorter 57 and a sheet-feeder 59 for refeeding the sheets for duplexing in an image forming apparatus. The sorter 57 and sheet-feeder 59 read on the instant invention's optional auxiliary device and feeding unit, respectively. The means for increasing expansibility of the sorter 57 comprises paths such as 144, 125, and 132₁ - 132_n. These paths or passages discharge sheets that are fed from sheet-feeder 59. Another cassette C₃ with sheets that can be fed into the image forming apparatus by way of the sheet-feeder 59. Note Figs. 7 and 8; column 13, lines 3-65.

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Sasaki et al. fails to show detecting a paper jam and operating the jammed paper removing means in a manner such that the paper jam is removed.

Arai discloses a sheet jam removal device in a sheet conveying unit. The sheet jam removal device have a lower conveyor 32 or lower conveying guide 45 that is a rectangular base member, a cover plate or upper conveyor 33 or upper conveying guide 50, paper feeding means 51 on upper conveyor 33 and 46 on the lower conveyor, and guiding means 35 for guiding the sheet jam removal device back and forth. As shown in Figs. 7a - 7b, there is a hinge shaft (not numbered in figures) located on the upper conveyor 33 for pivoting the upper conveyor 33 when it is separated from the lower conveyor 32. The linkage 34 links the upper conveyor 33 and the lower conveyor 32 which reads on the instant invention's elastic member. A handle shown in Fig. 2 is on the top of the front side of the main frame 30 of the sheet jam removal device for an operator to withdrawn the device from the image forming apparatus to access to it when a jam has occurred. When a jam occurs in this section of the image forming apparatus, a display section on the upper surface of the copying machine main body 1 will indicate a jam has occurred. Note column 7, line 39- column 8, line 65, and column 9, lines 19-45.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Sasaki et al. with that of Arai so that sheet jams can be more easily removed in an image forming apparatus. It is well known in the art that sheet jams occur along a sheet conveyance path in an image forming apparatus due to a build up of static electricity or humidity inside the image forming apparatus. In order to remove a sheet jam from a sheet

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path, one looks to Arai for an operator-accessible way that is noncumbersome (note column 2, lines 6-22) to maintain clearing of sheet jam in an image forming apparatus. Note column 1, lines 5-11.

6. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Arai (828) as applied to claims 2, 3, 7, 13-15, and 18 above, and further in view of Yim (307).

Applicant's Admitted Prior Art (Preamble - Jepson Claim) as modified by Arai differ from the instant invention by not disclosing a pair of guiding rollers as the guiding means.

Yim discloses it is well know in the art to use rollers for guiding a drawer while the drawer is pushed in or pulled out of an apparatus. Note column 1, lines 46-54.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Arai with that of Yim in order to further guide the feeding unit.

7. Claims 6 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (616) in view of Arai (828) as applied to claims 2, 3, 7, 9, 10, 15, and 18 above, and further in view of Yim (307).

Sasaki et al. as modified by Arai differ from the instant invention by not disclosing a pair of guiding rollers as the guiding means.

Yim discloses it is well know in the art to use rollers for guiding a drawer while the drawer is pushed in or pulled out of an apparatus. Note column 1, lines 46-54.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Sasaki et al. in view of Arai with that of Yim in order to further guide the feeding unit.

8. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Arai (828) as applied to claims 2, 3, 7, 13-15, and 18 above, and further in view of Mochimaru (299).

Applicant's Admitted Prior Art (Preamble - Jepson Claim) as modified by Arai (828) differ from the instant invention by not disclosing a plurality of position guiding means fixed to a rear side of the base member and a corresponding plurality of position guiding holes formed in an inner portion of the main body into which the position guiding members are respectively inserted.

Mochimaru discloses an image forming kit 20 that is loaded into the housing 10 of an image forming apparatus by positioning pins 52. Note column 3, lines 16-39 and Fig. 1.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Arai (828) with that of Mochimaru so that the apparatus can be easily positioned within the image forming apparatus without difficulty. It is inherent in Mochimaru that the positioning pins are received in respective holes so that the removable apparatus can be securely positioned inside the image forming apparatus.

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9. Claims 8 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al. (616) in view of Arai (828) as applied to claims 2, 3, 7, 9, 10, 15, and 18 above, and further in view of Mochimaru (299).

Sasaki et al. as modified by Arai differ from the instant invention by not disclosing a plurality of position guiding means fixed to a rear side of the base member and a corresponding plurality of position guiding holes formed in an inner portion of the main body into which the position guiding members are respectively inserted.

Mochimaru discloses an image forming kit 20 that is loaded into the housing 10 of an image forming apparatus by positioning pins 52. Note column 3, lines 16-39 and Fig. 1.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the apparatus of Sasaki et al. as modified by Arai with that of Mochimaru so that the apparatus can be easily positioned within the image forming apparatus without difficulty. It is inherent in Mochimaru that the positioning pins are received in respective holes so that the removable apparatus can be securely positioned inside the image forming apparatus.

Allowable Subject Matter

10. Claims 4, 5, 11, 12, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Response to Arguments

11. Upon consideration of the arguments made by applicant, the rejections to claims 9-12 and 13-19 under 35 USC § 112, second paragraph, and 35 USC § 101 are hereby withdrawn.

12. Applicant's arguments filed 8/23/01 have been fully considered but they are not persuasive.

Applicant argues that there is no "specific findings of fact regarding the level of ordinary skill in the art" (applicant's remarks, page 25, lines 10-12 and page 30, lines 13-15). This is incorrect. It is noted that the level of skill is high and individuals in this art typically have advanced degrees.

It is argued that there is no teaching of motivation or suggestion for combining the prior art references in order to establish prima facie obviousness (applicant's remarks, page 26, lines 10-13 and page 30, lines 13-15). This is incorrect. Examiner provided reasons for combining in the office action mailed 4/25/01. Furthermore, a more detailed reason for combining for claim 1, Admitted Prior Art (Preamble - Jepson Claim) in view of Sasaki et al. is to allow Applicant's admitted prior art to perform multiple functions in order to enhance copying capabilities desired by an operator. Such multiple functions include making duplex copies or superimposed copies as disclosed by Sasaki et al. (Note abstract). This multiple function system for an image forming apparatus is disclosed by Sasaki et al. in column 1, lines 7-25 as being a desire feature for copying machines. Paths such as 144, 125, and 132₁ - 132_n read on the instant invention's "first paper transport path, second transport path, and third transport path", etc. The applicant continues to argue that the "means for increasing expansibility of Sasaki's second

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embodiment ... is not the same structure as is described in Lim's specification" (applicant remarks, page 29, lines 5-7). In response to this, it is noted that the features as applicant states is in the specification are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant claims the "means comprising a first paper transport path, a second paper transport path, and a third paper transport path for discharging the sheets of recording paper which the feeding unit has fed". It is not understood why the applicant says that there are missing structural elements when the paths as mentioned in Sasaki et al. read on the paths of the claimed instant invention. Just merely reciting that there are "missing structural elements" and a comment such as "where is that reference" does not point out any differences between the paths of Sasaki et al. and that of the claimed invention. Applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

A more detailed reason for combining references for claim 1, Sasaki et al. in view of Takahashi et al., is to expand supplies of paper to be copied without occupying more floor space. A capability of having more area inside of the image forming apparatus for paper supplies would save time for the operator to resupply and to place the paper supply at a lower portion of the main body would save space. As for Sasaki et al. in view of Arai for claim 1, it is well known in the

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art that sheet jams occur along a sheet conveyance path in an image forming apparatus due to a build up of static electricity or humidity inside the image forming apparatus. In order to remove a sheet jam from a sheet path, one looks to Arai for an operator-accessible way that is noncumbersome (note column 2, lines 6-22) to maintain clearing of sheet jam in an image forming apparatus.

As to claims 2, 3, 7, 13-15, and 18, Applicant's Admitted Prior Art (Preamble - Jepson Claim) in view of Arai, the reasons for combining the references is that it is well known in the art that sheet jams occur along a sheet conveyance path in an image forming apparatus due to a build up of static electricity or humidity inside the image forming apparatus. In order to remove a sheet jam from a sheet path, one looks to Arai for an operator-accessible way that is noncumbersome (note column 2, lines 6-22) to maintain clearing of sheet jam in an image forming apparatus. Note column 1, lines 5-11. As to claims 2, 3, 7, 9, 10, 15, and 18, Sasaki et al. (616) in view of Arai (828), it is the same as mentioned in the preceding remarks. Another reason is that one provides paper jam removing means in the image forming apparatus art in order to remove paper jams. This is a hoary concept. The level of skill in the art is high, but even the lowliest technician is aware that paper jam must be removed. Everyone who uses a copying machine is aware that paper jams occur. A claim that recites as its inventive feature "a feeding unit assembly comprising a jammed paper removing means" is so broad it reads on at least twenty-seven class/subclasses of the US Patent Classification System. It is also argued that Arai does not disclose the instant invention's "means" as described in the specification as required by means-plus-function format

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that the claims are drafted in. Specifically applicant has identified that Arai has rigid metal parts. Applicant argues that the elastic member described in the instant invention is different than the linkage 34 of Arai. Applicant further states claims have been amended to recite "elastic spring member" as was done in dependent claims 5, 12, and 16. The doctrine of claim differentiation requires an independent claim to be interpreted so that the dependent claim will have meaning if possible. In this case, claims 5, 12, and 16 recite a "spring", therefore claims 2, 9, and 13 should be interpreted as broader than a spring. Thus elements 34 of Arai reads on the elastic member because the linkage 34 will have some amount of elasticity. Therefore, applicant's arguments only applies to dependent claims 5, 12, and 16. Again, applicant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims, specifically independent claims 2, 9, and 13, present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections.

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37


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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Lee whose telephone number is (703)308-2138.

The fax number of this Group is (703) 305-3432.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703)308-0956.


S. Lee
Primary Examiner
Art Unit 2852
November 6, 2001